R. Schudron

1644

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/248,964A

DATE: 11/28/2000 RECEIVED TIME: 11:56:24

Input Set : A:\HAR005.APP.txt

Output Set: N:\CRF3\11282000\I248964A.raw

OEC 15 2000

TECH CENTERIBIDIZATO

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2 <110> APPLICANT: WUCHERPFENNIG, Kai W
             STROMINGER, Jack L
     3
     5 <120> TITLE OF INVENTION: MONOVALENT, MULTIVALENT AND MULTIMERIC MHC BINDING
     6
             DOMAIN FUSION PROTEINS AND CONJUGATES, AND USES
     9 <130> FILE REFERENCE: HAR-005
    11. <140> CURRENT APPLICATION NUMBER: 09/248,964A
    12 <141> CURRENT FILING DATE: 1999-02-12
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    15 <151> PRIOR FILING DATE: 1997-08-15
    17 <150> PRIOR APPLICATION NUMBER: 60/075,351
    18 <151> PRIOR FILING DATE: 1998-02-19
    20 <150> PRIOR APPLICATION NUMBER: 60/024,007
    21 <151> PRIOR FILING DATE: 1996-08-15
    23 <160> NUMBER OF SEQ ID NOS: 14
    25 <170> SOFTWARE: PatentIn Ver. 2.0
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    40 <221> NAME/KEY: misc_feature
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    45 <221> NAME/KEY: misc_structure
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    47 <223> OTHER INFORMATION: DRA*0101 extracellular domain
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    57 <223> OTHER INFORMATION: Fos leucine zipper domain
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    60 Val Ser Leu Glu Lys Arg Glu Ile Lys Glu Glu His Val Ile Ile Gln
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    63 gee gag tto tat etg aat eet gac caa tea gge gag ttt atg ttt gae
                                                                         96
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64 Ala Glu Phe Tyr Leu Asn Pro Asp Gln Ser Gly Glu Phe Met Phe Asp

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67 ttt gat ggt gat gag att ttc cat gtg gat atg gca aag aag gag acg
68 Phe Asp Gly Asp Glu Ile Phe His Val Asp Met Ala Lys Lys Glu Thr
       35
                              40
                                                 45
71 gtc tgg cgg ctt gaa gaa ttt gga cga ttt gcc agc ttt gag gct caa
72 Val Trp Arg Leu Glu Glu Phe Gly Arg Phe Ala Ser Phe Glu Ala Gln
7.3 50
                          55
                                              60
75 ggt gca ttg gcc aac ata gct gtg gac aaa gcc aac ttg gaa atc atg
76 Cly Ala Leu Ala Asn Ile Ala Val Asp Lys Ala Asn Leu Glu Ile Met
                       70
79 aca aag ege tee aac tat act eeg ate ace aat gta eet eea gag gta
80 Thr Lys Arg Ser Asn Tyr Thr Pro Ile Thr Asn Val. Pro Pro Glu Val
                  85
                                      90
83 act gtg ctc acg aac age eet gtg gaa etg aga gag eec aac gte etc
84 Thr Val Leu Thr Asn Ser Pro Val Glu Leu Arg Glu Pro Asn Val Leu
           1.00
                              105
87 atc tgt ttc ata gac aag ttc acc cca gtg gtc aat gtc acg tgg
88 Ile Cys Phe Ile Asp Lys Phe Thr Pro Pro Val Val Asn Val Thr Trp
        115
                            120
                                                125
91 off ega aat gga aaa oof gto acc aca gga gtg toa gag aca gto tto
                                                                    432
92 Leu Arg Asn Gly Lys Pro Val Thr Thr Gly Val Ser Glu Thr Val Phe
                                             1.40
                        135
95 ctg ccc agg gaa gac cac ctt ttc cgc aag ttc cac tat ctc ccc ttc
96 Leu Pro Arg Glu Asp His Leu Phe Arg Lys Phe His Tyr Leu Pro Phe
97 145
                      150
                                          1.55
99 ctg ccc tca act gag gac gtt tac gac tgc agg gtg gag cac tgg ggc
100 Leu Pro Ser Thr Glu Asp Val Tyr Asp Cys Arg Val Glu His Trp Gly
101 165 170 175
103 ttg gat gag cct ctt ctc aag cac tgg gag ttt gat gct cca agc cct
104 Leu Asp Glu Pro Leu Leu Lys His Trp Glu Phe Asp Ala Pro Ser Pro
               180
                                   185
107 etc eca gag act aca gag gtc gac gga ggt ggc ggc ggt tta act gat
108 Leu Pro Glu Thr Thr Glu Val Asp Gly Gly Gly Gly Leu Thr Asp
109 195
                            200
                                                205
111 aca ete caa geg gag aca gat caa ett gaa gae gag aag tet geg tig
112 Thr Leu Gln Ala Glu Thr Asp Gln Leu Glu Asp Glu Lys Ser Ala Leu
                          215
115 cag acc gag att gcc aat cta ctg aaa gag aag gaa aaa ctg gag ttc
116 Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu Lys Glu Lys Leu Glu Phe
117 225 ,230
119 atc ctg gcc gcc cat tgagaattct atgac
                                                                     750
120 Ile Leu Ala Ala His
121
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125 <212> TYPE: PRT
126 <213> ORGANISM: Artificial Sequence
128 <220> FEATURE:
129 <223> OTHER INFORMATION: Description of Artificial Sequence: DR2-Fos fusion
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RAW SEQUENCE LISTING DATE: 11/28/2000 PATENT APPLICATION: US/09/248,964A TIME: 11:56:24

Input Set : A:\HAR005.APP.txt

Output Set: N:\CRF3\11282000\1248964A.raw

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131 <220> FEATURE:
132 <221> NAME/KEY: misc_feature
133 <222> LOCATION: (1)..(7)
134 <223> OTHER INFORMATION: 3' end of secretory signal
136 <220> FEATURE:
137 <221> NAME/KEY: misc_structure
138 <222> LOCATION: (8)..(198)
139 <223> OTHER INFORMATION: DRA*0101 extracellular domain
141 <220> FEATURE:
142 <221> NAME/KEY: misc_feature
143 <222> LOCATION: (199)..(205)
144 <223> OTHER INFORMATION: Linker sequence
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147 <221> NAME/KEY: misc_feature
148 <222> LOCATION: (206)..(245)
149 <223> OTHER INFORMATION: Fos leucine zipper domain
151 <400> SEQUENCE: 2
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155 Ala Glu Phe Tyr Leu Asn Pro Asp Gln Ser Gly Glu Phe Met Phe Asp
156 20 25 30
158 Phe Asp Gly Asp Glu Ile Phe His Val Asp Met Ala Lys Lys Glu Thr
161 Val Trp Arg Leu Glu Glu Phe Gly Arg Phe Ala Ser Phe Glu Ala Gln
162 50
                                                                                                  5.5
164 Gly Ala Leu Ala Asn Ile Ala Val Asp Lys Ala Asn Leu Glu Ile Met
1.65 65 70
                                                                                                                                                              75
167 Thr Lys Arg Ser Asn Tyr Thr Pro Tle Thr Asn Val Pro Pro Glu Val
1.68 85
                                                                                                                                          90
170 Thr Val Leu Thr Asn Ser Pro Val Glu Leu Arg Glu Pro Asn Val Leu 171 \phantom{\bigg|}100\phantom{\bigg|}\phantom{\bigg|}100\phantom{\bigg|}\phantom{\bigg|}\phantom{\bigg|}
172 Ile Cys Phe Ile Asp Lys Phe Thr Pro Pro Val Val Asn Val Thr Trp 173 1.15 120 125
175 Leu Arg Asn Gly Lys Pro Val Thr Thr Gly Val Ser Glu Thr Val Phe 176 \phantom{\bigg|}130\phantom{\bigg|}130\phantom{\bigg|}135\phantom{\bigg|}
178 Leu Pro Arg Glu Asp His Leu Phe Arg Lys Phe His Tyr Leu Pro Phe 179 145 \phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150\phantom{\bigg|}150
181 Leu Pro Ser Thr Glu Asp Val Tyr Asp Cys Arg Val Glu His Trp Gly
                                                                                                                                        170
182
                                     1.65
184 Leu Asp Glu Pro Leu Leu Lys His Trp Glu Phe Asp Ala Pro Ser Pro
185
                                                  180
                                                                                                                               185
187 Leu Pro Glu Thr Thr Glu Val Asp Gly Gly Gly Gly Gly Leu Thr Asp 188 195 200 205
190 Thr Leu Gln Ala Glu Thr Asp Gln Leu Glu Asp Glu Lys Ser Ala Leu 191. 210 215 220
193 Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu Lys Glu Lys Leu Glu Phe
194 225 230 235 240
196 Ile Leu Ala Ala His
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DATE: 11/28/2000 TIME: 11:56:24

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RECEIVE

DEC 152006.

TROM CENTER 1600/2900

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200 <211> LENGTH: 771
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205 <223> OTHER INFORMATION: Description of Artificial Sequence: DR2-Jun fusion
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209 <222> LOCATION: (1)..(756)
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213 <222> LOCATION: (1)..(21)
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218 <222> LOCATION: (22)..(615)
219 <223> OTHER INFORMATION: DRB1*1501 extracellular domain
221 <220> FEATURE:
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223 <222> LOCATION: (616)..(636)
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                                                             1.5
236 cag cct aag agg gag tgt cat ttc ttc aat ggg acg gag cgg gtg cgg
237 Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg
240\ {\rm ttc} etg gac aga tac ttc tat aac cag gag gag tcc gtg egc ttc gac
                                                                      1.44
241 Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser Val Arg Phe Asp
            35
                                40
244 ago gao gtg ggg gag tto egg geg gtg acg gag etg ggg egg eet gac
245 Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp
246 50
                           5.5
                                                60
248 get gag tae tgg aac age cag aag gac ate etg gag cag geg egg gec
249 Ala Glu Tyr Trp Asn Ser Gin Lys Asp Ile Leu Glu Gln Aia Arg Ala
250 65
                        70
                                             75
252 geg gtg gac aec tac tgc aga cac aac tac ggg gtt gtg gag agc ttc
253 Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu Ser Phe
                85
                                       90
256 aca gtg cag cgg cga gtc caa cct aag gtg act gta tat cct tca aag
257 Thr Val Gln Arg Arg Val Gln Pro Lys Val Thr Val Tyr Pro Ser Lys
258 100 105 110
260 acc dag ded ctg dag dad dad etc etg gtd tgd tet gtg agt ggt
261 Thr Gln Pro Leu Gln His His Asn Leu Leu Val Cys Ser Val Ser Gly
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RAW SEQUENCE LISTING DATE: 11/28/2000 PATENT APPLICATION: US/09/248,964A TIME: 11:56:24

Input Set : A:\HAR005.APP.txt

Output Set: N:\CRF3\11282000\I248964A.raw

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                          135
268 gag aag get ggg atg gtg tee aca gge etg ate eag aat gga gae tgg
269 Glu Lys Ala Gly Met Val Ser Thr Gly Leu Ile Gln Asn Gly Asp Trp
270 1.45
                      1.50
                                         155
272 acc ttc cag acc ctg gtg atg ctg gaa aca gtt cct cga agt gga gag
273 Thr Phe Gln Thr Leu Val Met Leu Glu Thr Val Pro Arg Ser Gly Glu
274
                   165
                                      170
                                                         175
276 gtt tac acc tgc caa gtg gag cac cca agc gtg aca agc cct ctc aca
277 Val Tyr Thr Cys Gln Val Glu His Pro Ser Val Thr Ser Pro Leu Thr
278
            180
                         185
                                                     190
280 gtg gaa tgg aga gca cgg tot gaa tot gca cag ago aag gto gao gga
281 Val Glu Trp Arg Ala Arg Ser Glu Ser Ala Gln Ser Lys Val Asp Gly
282 195
                          200
286 ggt ggc ggc ggt ege ate gec egg ete gag gaa aaa gtg aaa ace ttg
287 Gly Gly Gly Gly Arg Ile Ala Arg Leu Glu Glu Lys Val Lys Thr Leu
                          215
288 210
                                             220
290 aaa get cag aac teg gaq ete geg tee aeg gee aac atg ete agg gaa
291 Lys Ala Gln Asn Ser Glu Leu Ala Ser Thr Ala Asn Met Leu Arg Glu
                                 235
292 225
                    230
                                                              240
294 cag gtg gca cag ctt aaa cag aaa gtc atg aac cat tgagaattct atgac
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299 <211> LENGTH: 252
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311 <220> FEATURE:
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313 <222> LOCATION: (8)..(205)
314 <223> OTHER INFORMATION: DRB1*1501 extracellular domain
316 <220> FEATURE:
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318 <222> LOCATION: (206)..(212)
319 <223> OTHER INFORMATION: Linker sequence
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324 <223> OTHER INFORMATION: Jun leucine zipper domain
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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/248,964A

DATE: 11/28/2000 TIME: 11:56:25

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Output Set: N:\CRF3\11282000\1248964A.raw

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